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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,328	03/12/2004	Takao Ishikawa	500.43624X00	6136
20457 7590 11/05/2007 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			EXAMINER PATTERSON, MARC A	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 11/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/798,328

Applicant(s)

ISHIKAWA ET AL.

Examiner

Marc A. Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-10, 12-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-10, 12-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

**WITHDRAWN REJECTIONS**

1. The 35 U.S.C. 102(b) rejection of Claims 8 – 10, 12, 16 and 19 – 20 as being anticipated by Ohta et al (U.S. Patent No. 5,954,866), of record on page 2 of the previous Action, is withdrawn.

**NEW REJECTIONS**

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed resins (phenolic, acrylic, epoxy, melamine) do not appear to be resins that contain carbon, nitrogen and oxygen. It is not clear if any one of the elements carbon, nitrogen and oxygen is sufficient, or if specific examples of these broad classes of resin are being claimed. If specific examples are being claimed, it does not appear that they are provided in the specification.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 8 – 10, 12, 16 and 19 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikenaga et al (U.S. Patent No. 6,165,619).

With regard to Claims 8 – 9 and 12, Ikenaga et al disclose a coating solution (column 6, line 55) which contains an element comprising titanium (column 6, line 60), a copper compound (column 6, line 63), and an element comprising iron (iron oxide; column 6, line 62); the element is a catalyst (column 6, line 57), and an organic compound comprising melamine (column 18, line 18) that is bound to the metallic element, because the metallic element is a catalyst, as stated above; however, the claimed aspect of the element being a catalyst component is directed to an intended use and is therefore given little patentable weight; the claimed aspect of the coating solution being for producing a ceramic tube is also directed to an intended use and is also given little patentable weight.

With regard to Claim 10, the coating solution contains chlorine (polyvinyl chloride, therefore comprising the element chlorine; column 18, lines 7 – 12).

With regard to Claim 16, the copper compound is a catalyst, as stated above, and is therefore a promoter, and is in the form of a salt comprising copper oxide.

With regard to Claims 19 – 20, Ikenaga et al do not disclose a component other carbon, copper and iron components; the coating solution disclosed by Ikenaga et al therefore consists of carbon, copper and iron components.

***Claim Rejections - 35 USC § 103***

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 13 – 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikenaga et al (U.S. Patent No. 6,165,619) in view of Robinson et al (U.S. Patent No. 4,487,747).

Ikenaga et al disclose copper compound as discussed above. With regard to Claims 13 – 14 and 18, Ikenaga et al fail to disclose a compound comprising copper chloride.

Robinson et al teach compounds comprising pigments comprising metal chloride for the purpose of using pigments that are also useable in metallurgy (column 1, lines 10 –13). One of ordinary skill in the art would therefore have recognized the advantage of providing for the metal chlorides of Robinson et al in Ikenaga et al, which comprises a compound, depending on the desired use of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for compounds comprising pigments comprising metal chloride, therefore iron chloride and copper chloride in Ikenaga et al in order to obtain pigments that are also useable in metallurgy as taught by Robinson et al.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikenaga et al (U.S. Patent No. 6,165,619) in view of Nishihara et al (U.S. Patent No. 5,017,231).

Ikenaga et al disclose a metal compound as discussed above. Ikenaga et al fail to disclose a compound comprising alkoxide.

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Nishihara et al disclose a compound comprising a pigment comprising alkoxide (column 2, lines 34 – 42) for the purpose of obtaining a pigment having excellent heat resistance (column 1, lines 8 – 11). One of ordinary skill in the art would therefore have recognized the advantage of providing for the alkoxide of Nishihara et al in Ikenaga et al, which comprises a pigment, depending on the desired heat resistance of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a compounds comprising pigments comprising alkoxide in Nishihara et al in order to obtain a pigment having excellent heat resistance as taught by Nishihara et al.

#### ANSWERS TO APPLICANT'S ARGUMENTS

9. Applicant's arguments regarding the 35 U.S.C. 102(b) rejection of Claims 8 – 10, 12, 16 and 19 – 20 as being anticipated by Ohta et al (U.S. Patent No. 5,954,866), of record in the previous Action, have been carefully considered and have been found to be persuasive. The rejections of the previous Action are therefore withdrawn. The new rejections above are directed to Claims 8 – 10, 12 – 16 and 18 – 20.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497. The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Marc A. Patterson* 10/31/07  
Marc A. Patterson, PhD.  
Primary Examiner  
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